

form of an elliptical projection, and the posterior area is a flat expansion. Both, especially the anterior projection, are quite sensitive to mechanical stimulation. They are both entirely distinct from the organ of special sense described by Brooks (1). Their special functions remain to be determined.

My thanks are due to Dr. W. K. Brooks, who has directed this work, and I wish publicly to acknowledge my indebtedness to my wife, who has materially aided me in securing, tending, and preserving specimens.

Zoological Laboratory, Johns Hopkins University,
Baltimore, May 1, 1897.

Literature cited.

1. BROOKS.—“An Organ of Special Sense in the Lamellibranchiate Genus *Yoldia*.” Proc. Am. Assoc. Adv. Sci. 1874.
2. KELLOGG.—“A Contribution to our Knowledge of Lamellibranchiate Mollusks.” Bull. U.S. Fish Com. 1890.
3. KOWALEVSKY.—“Étude sur l'embryogénie du Dentale.” Ann. du Musée d'hist. nat. de Marseille, Zool. tome i. 1883.
4. LACAZE-DUTHIERS.—“Histoire de l'organisation et du développement du Dentale.” Ann. des Sci. nat. iv. sér. tome vii. 1857.
5. MITSUKURI.—“On the Structure and Significance of some Aberrant Forms of Lamellibranchiate Gills.” Quart. Journ. Micr. Sci. vol. xxi. 1881.
6. PELSNER.—“Contribution à l'étude des Lamellibranches.” Archives de Biol. tome xi. 1891.
7. PRUVOT.—“Sur le développement d'un Solénogastre.” Comptes Rend., Paris, tome cxi. 1890.
8. SIGERFOOS.—“Notes on the Organization of the Larva and the Post-larval Development of Ship-worms.” Johns Hopkins University Circulars, vol. xv. no. 126. 1896. Ann. & Mag. Nat. Hist. vol. xviii. 1896.
9. WILSON.—“Origin of the Mesoblast-bands in Annelids.” Journ. of Morph. vol. iv. no. 2. 1890.

XLV.—On some new Mammals from the Neighbourhood of Mount Sahama, Bolivia. By OLDFIELD THOMAS.

THE British Museum has purchased from Mr. Gustav Garlepp a small series of mammals obtained by him at Esperanza, a “tambo” in the neighbourhood of Mount Sahama, Bolivia, while collecting birds for Count von Berlepsch. The specimens prove to be of considerable interest, as there are among them examples of no less than five new species, one of these representing a new genus.

Mr. Garlepp informs me that “the mammals were all taken at an altitude of 4000 metres in the ‘Puna’ region—that is to say, on the high plateau between the Coast

Cordillera and the main Eastern Cordillera—a region which is without trees and is partly covered with low bushes and partly with short grass. In this steppe-like country, and not on broken or rocky ground, all the mammals were collected. Mount Sahama itself, distant some 50 kilometres from the place where the collection was made, is one of the highest peaks of the Coast Cordillera, attaining an altitude of about 7000 metres.”

Besides the new species, examples of *Canis azaræ*, *Ctenomys opimus*, *Lagidium peruanum*, and *Cavia boliviensis* occur in the collection.

Conepatus rex, sp. n.

Size comparatively large. Fur very long and thick, 75 to 80 millim. long on the back. Hairs of neck and anterior back definitely reversed forwards, from a pair of prominent hair-whorls just behind the shoulders to a transverse ridge between the ears, formed by the meeting of the opposed hairs. White of back forming two broad bands, extending from the hair-ridge between the ears backwards on to the rump, but not reaching the tail; in front of the hair-whorls these bands are separated by a narrow black band about half an inch in breadth, which disappears at the whorls, where the two bands coalesce. Behind the whorls the two bands rapidly separate to a distance from each other of about 3 or 4 inches. Tail very long and bushy, much longer than in most of the South-American forms, and uniformly bushy throughout, the hairs from 80 to 120 millim. in length; in colour it is nearly wholly black, there being only a few scattered white hairs on its terminal third. Posterior half of soles thickly hairy.

Dimensions of the type (an old female), taken on the skin, and all merely approximate:—

Head and body 430 millim.*; tail, without hairs 270, with hairs 340; hind foot, without claws 66, with claws 73.

Skull: basal length 67·5; greatest zygomatic breadth 45; greatest mastoid breadth 41·5; interorbital breadth 22·5; intertemporal breadth 19·5; palate length from gnathion 31·5. The teeth are too much worn down to be measured or described.

Type B.M. no. 98. 3. 16. 4; original number 1752. Killed 3rd June, 1897.

This exceedingly handsome skunk is quite unlike any *Conepatus* that I can find recorded. Perhaps the nearest to

* Mr. Garlepp gives 680 millim. as the total length in the flesh.

it is the specimen from "Tropical America" described in 1865 by Gray as "*Conepatus nasutus*, var. 4. *Lichtensteini*"*, but this differs by its smaller size, narrower white dorsal lines, white tail, naked soles, and other details. Somewhat similar specimens to the latter come from Costa Rica.

Phyllotis (?) *Garleppii*, sp. n.

General appearance very like that of one of the North-American "Grasshopper Mice" (*Onychomys*), an appearance chiefly due to the short tail. Fur close and thick, not particularly long for an inhabitant of such altitudes; hairs of back about 12 millim. in length. General colour above greyish buff, finely lined with black, becoming clear buff along the sides. Face rather paler, rump rather stronger buff, but no special contrasts present. Eyes without darker rings. Ears smaller than in other *Phyllotes*, their colour not unlike that of the back, except that the anterior part of the outer surface is rather blacker. Hairs of under surface slaty basally, snowy white terminally, the line of demarcation on sides sharply marked; on the chest the hairs are snowy white to their roots. Hands and feet pure white above; soles hairy for their posterior two thirds. Tail extremely short, not twice the length of the hind foot; closely haired, pure white above and below throughout.

Skull with a very convex frontal profile, the muzzle being markedly bent downwards; nasals long, hiding the incisors from above; zygomata starting very strongly and abruptly outwards, and then turned back almost at a right angle, front edge of their anterior root much slanted and running up to a very high level on the skull, so that the forehead does not project above the upper anterior zygoma-root. Supraorbital edges square, not ridged. Palatal foramina long and well open, reaching backward to the middle of *m*.¹

Incisors more thrown forward than usual, very slender, their narrow anterior faces pale yellow above and below.

Dimensions of the type (an adult male) measured in skin:—

Head and body 123 † millim.; tail 33; hind foot (wet) 25; ear (wet) 18.

Skull: greatest breadth 17·8; nasals 13·4 × 4; interorbital breadth 3·7; palate length from henselion 14·2; diastema 8·7; palatal foramina 7·2 × 2·5; length of upper molar series 5·1; lower jaw, condyle to incisor-tip 21.

* P. Z. S. 1865, p. 147; Cat. Carn. B. M. p. 135 (1869).

† "Total length 165 millim." (*G. Garlepp*).

Type B.M. no. 98. 3. 16. 5; original number 1740. Killed May 20, 1897.

It is with great doubt that I place this remarkable mouse in the genus *Phyllotis*, as its short tail and hairy feet give it a very different appearance to that of *Ph. Darwini*, the typical species of that group. *Ph. boliviensis*, however, seems so to connect the two forms that, until further material is obtained, Mr. Garlepp's mouse may be provisionally referred to *Phyllotis*.

CHINCHILLULA, gen. nov.

Form approximately that of the short-tailed species of *Phyllotis*. Ears very large. Fur excessively long and soft. Palms and soles naked, except just under the heel, with 5-6 pads; pollex with a rather elongated nail.

Skull very much as in *Phyllotis*, but the molar teeth enormously enlarged and very high-crowned, their greatest breadth equal to the space between the anterior pair. In pattern they are simpler than in *Phyllotis*, the posterior lamina of *m.*¹ simply transverse and not tending to be constricted into two loops; *m.*² and *m.*³ without anterior supplementary cusps and the general pattern simpler, posterior lamina of *m.*³ much narrower than the anterior. Lower molars similarly modified; the posterior supplementary hooks absent, and the last molar, instead of being more or less sigmoid, consisting of two simple laminae connected mesially, the posterior much smaller than the anterior.

Chinchillula sahamæ, sp. n.

Size about as in *Phyllotis Darwini*, but general form appearing stouter, mainly on account of the length of the fur. Pelage excessively long, soft and silky, very like that of a Chinchilla both in colour and texture, the underfur about 18 or 19 millim. long on the back, and mixed with a few longer hairs, which attain to upwards of 25 millim. General colour above cinereous grey, washed with blackish; the hairs of the back slaty for four-fifths their length, then pale greyish white, and finally tipped with black. The projecting ends of the longer hairs are black, except on the rump, where they are white. Eyes faintly black-ringed. Ears large, rounded, their visible surfaces, when folded, black; a small white patch at the base of their outer margin. Outer side of hips with a whitish projection running up from the belly-colour into that of the back, succeeded behind by a blacker area on the back of the hams, and this again succeeded by a white

area round the base of the tail. Belly-hairs snowy white terminally, slaty basally. Upper surface of hands and feet well-haired, white. Tail less than half as long as the head and body, well-haired and pencilled, though not to be called bushy, uniformly white throughout.

Skull (in a rather immature specimen) rounded, not unlike in general outline that of *Phyllotis Darwini*, though broader in proportion to its length. Nasals barely reaching forward far enough to hide the incisors; behind they just surpass the premaxillary processes. Supraorbital edges square (probably sharply so in old age), not beaded or ridged. Interparietal large. Anterior edge of zygoma-root little projecting, evenly slanting forwards. Anterior palatine foramina well open, their edges sharply ridged, their posterior ends level with the anterior lamina of m^1 . Hinder edge of palate level with the centre of m^3 , V-shaped instead of transverse, but this may be due to youth. Bullæ rather larger than in *Phyllotis*.

Teeth.—Incisors narrow, smooth in front, pale yellowish above and below. Molars as described above; their extreme hypsodontism may be gauged by the fact that the vertical height of the first outer groove on m^1 is no less than 3 millim. At its broadest point m^1 is 2.5 millim. in breadth.

Dimensions of the type (a slightly immature male), measured in skin:—

Head and body 122 * millim.; tail 59; hind foot, without claws (wet) 26.5, with claws 28; ear 23.

Skull: basal length (c.) 25; basilar length (c.) 24; greatest breadth 16.5; nasals, length 10.7; interorbital breadth 4.8; interparietal 3.7×12 ; palate length from henschlion 14; diastema 8; palatine foramina 6.3×2.6 ; length of upper molar series (on alveoli) 7.2.

Type B.M. no. 98. 3. 16. 6; original number 1777. Killed June 25, 1897.

Akodon Berlepschii, sp. n.

Size and general proportions about as in *A. mollis*, Thos. Fur thick and close, about 7–9 millim. long on the back. General colour above dark cinereous grey, blacker on the centre of the back, clearer grey along the sides; no tendency to fulvous, rufous, or olive tones. The hairs of the back are an unusually dark blackish slaty, with a subterminal band of white, succeeded by black tips; there are also a considerable number of longer black hairs intermixed with the shorter ones. Face like back, no darker markings round eyes.

* Mr. Garlepp records the total length, including tail, as 185 millim.

Ears of medium length, thickly hairy, blackish grey terminally, more whitish grey basally, a lighter greyish patch present behind their posterior bases. Under surface strongly contrasted white, the bases of the hairs slaty, their tips snowy white. Hands and feet wholly white above. Anterior claws rather more elongate than in the allied forms. Tail about equal in length to the body without the head, well-haired, prominently bicolor, black above and white below for its whole length, except that the tip below is also blackish.

Skull almost precisely similar to that of *A. mollis*; interorbital region broad, its edges square, not ridged. Interparietal quite minute. Palatine foramina reaching back beyond the middle of *m*.¹.

Dimensions of the type, measured in skin:—

Head and body * 104 millim.; tail 75; hind foot (wet) 20; ear (wet) 13.

Skull: back of interparietal to front of nasals 24·2; greatest breadth 13·3; nasals 13·6 × 3·2; interorbital breadth 5; palate length from henselion 11; diastema 6·9; palatal foramina 6 × 2·1; length of upper molar series 4·1.

Type B.M. no. 98. 3. 16. 7; original number 1695. Killed 28th April, 1897.

While as regards the skull this mouse can scarcely be distinguished from *A. mollis*, its colour is entirely different both from that and every other known *Akodon*.

I have named this species in honour of Count von Berlepsch, the eminent ornithologist, by whose assistance Mr. Garlepp was enabled to make his explorations and through whose courtesy the British Museum has been allowed to acquire the mammals he collected.

Cavia niata, sp. n.

Size small, about as in *C. australis*. Fur of medium length, the hairs 15–18 millim. long on the back. General colour a peculiar pale yellowish buff, quite unlike that of any other Cavy. Face, cheeks, hairs on and at base of ears more whitish buff. Whole of under surface and anal area white, with a slight buffy tinge, not sharply defined on the sides; bases of hairs pale slaty. Upper surface of hands and feet also buffy white.

Skull very peculiarly shortened and rounded, in exaggeration of the characteristics of that of *C. australis*. Upper profile very strongly convex, the muzzle bent down to an unusual angle with the basicranial axis. Nasals short and

* "Total length 175 millim." (*G. G.*)

broad, evenly broadening backwards, and then abruptly truncated, not narrowing to a median point posteriorly, their hinder margin convex backwards; premaxillary processes very narrow and slender. Zygomata strongly and evenly bowed outwards, the outlines of the two, continued across the muzzle, forming together three-fourths of a circle. Palatine foramina long, as in *C. australis*, but markedly narrower. Posterior palatal margin rounded, not angular, level with the hinder lamina of *m.*³.

Incisors slender, narrow, the upper ones more thrown forwards than in other species, their front surface white. Posterior talon of *m.*³ much less developed than in *C. australis*.

Dimensions of the type (an adult female):—

Head and body (*vide* Garlepp) 190 millim.; hind foot (wet) 34; ear (wet) 13.

Skull: basal length 36·6; basilar length from henselion 33·5; greatest breadth 29·5; nasals 15 × 9·1; interorbital breadth 11; palate length from henselion 18·5; diastema 9·3; palatal foramina 5·5 × 2·1; length of upper molar series (crowns) 10·2.

Type B.M. no. 98. 3. 16. 20; original number 1716. Killed May 8, 1897.

The only known species to which this curious little Cavy is even distantly allied is *C. australis*, but that differs markedly from it both in cranial and external characters. *C. mænus*, described in the following paper, is, on the other hand, closely allied to *C. australis* and equally distant from *C. niata*.

XLVI.—*Descriptions of Two new Argentine Rodents.*

By OLDFIELD THOMAS.

(I.)

THE British Museum owes to the kindness of Dr. F. P. Moreno, of the La Plata Museum, the skin of a Cavy from Rioja, obtained by him during the same expedition on which he discovered the *Eligmodontia Moreni* described by me in 1896*. In working out the Cavies collected by Mr. Garlepp and referred to in the preceding paper the Rioja one also proves to be new, and may be described as follows:—

* Ann. & Mag. Nat. Hist. (6) xviii. p. 307 (1896).